

# **ECS Evaluation Packages EP4 Test Readiness Review**

---

**November 2, 1994**

# EP4 TRR Agenda

---

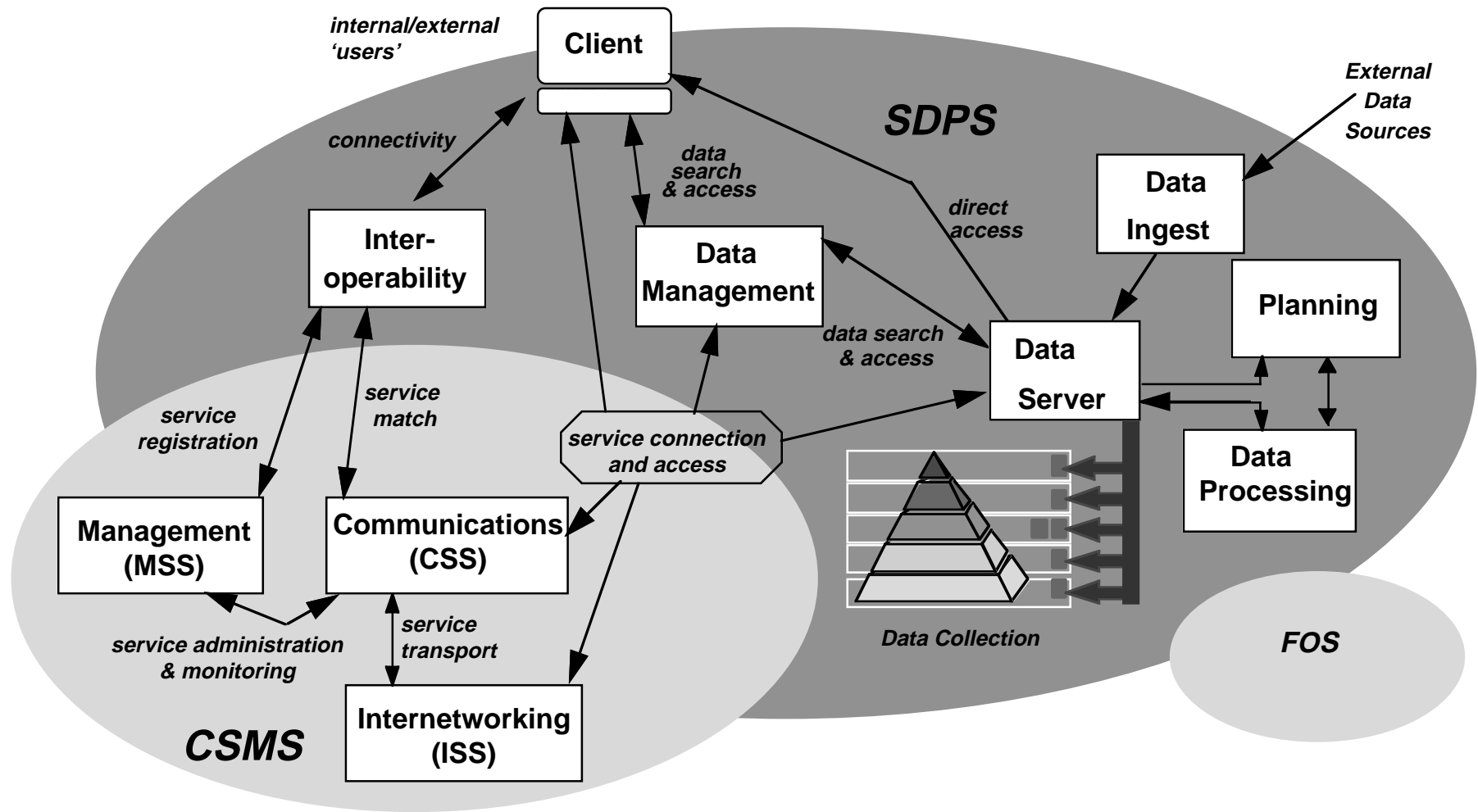
## **Purpose of EP4 TRR**

- **Status any changes to functionality since EP4 Design Review**
- **Design freeze: Changes after TRR to fix discrepancies**
- **Begin planning for deployment and evaluation**

## **Agenda**

- 3:30 EP4 Overview - George Percivall**
- 3:40 SDPS EP4 TRR Status - Evelyn Nakamura**
- 3:50 CSMS EP4 TRR Status - Evan Winston**
- 4:00 EP4 Integration and Test - Gil Tadmor**
- 4:10 EP4 Usability Testing - Jan Poston**
- 4:25 Action Items and Next Steps - George Percivall**
- 4:30 Adjourn**

# ECS EP Context

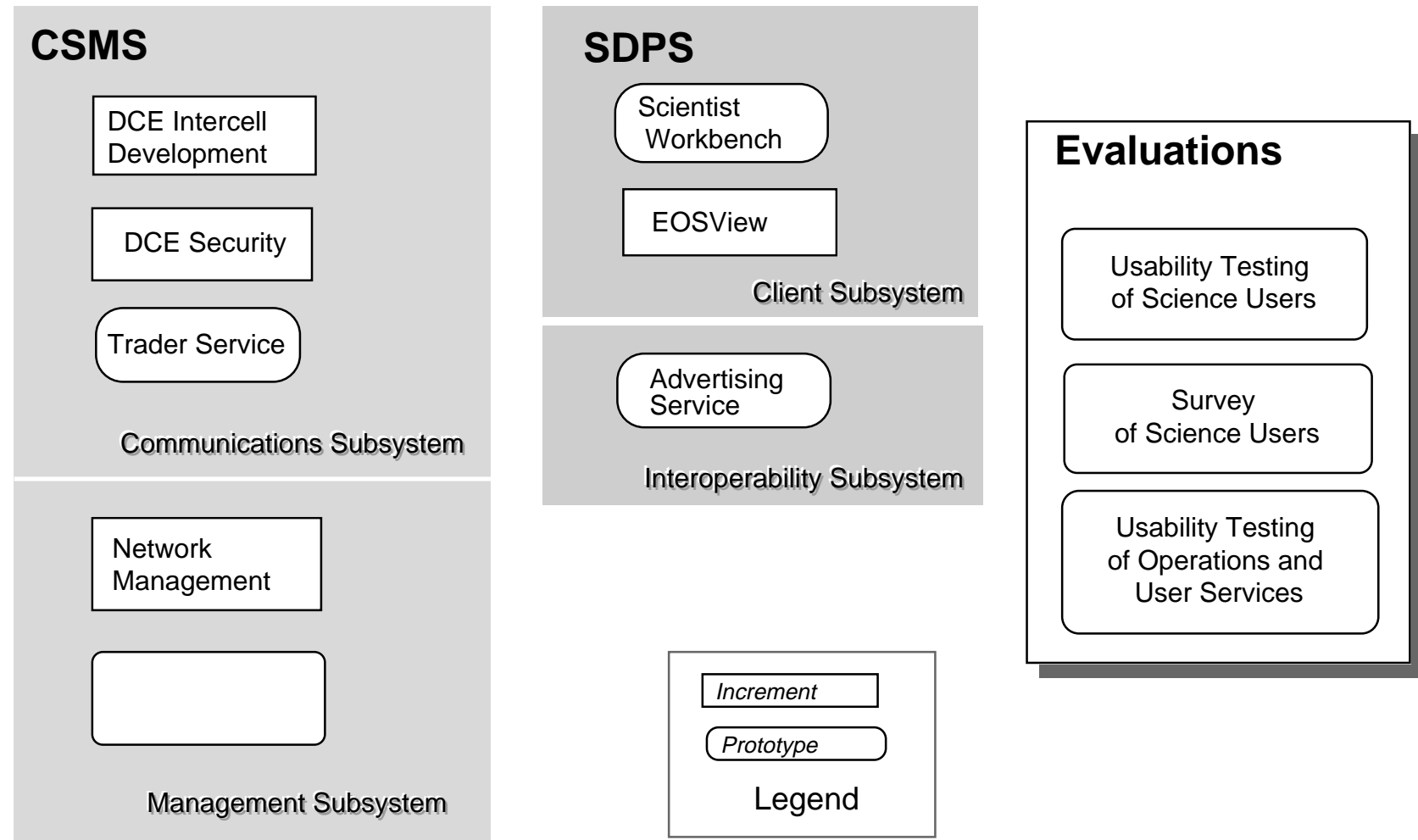


# ECS Development Tracks

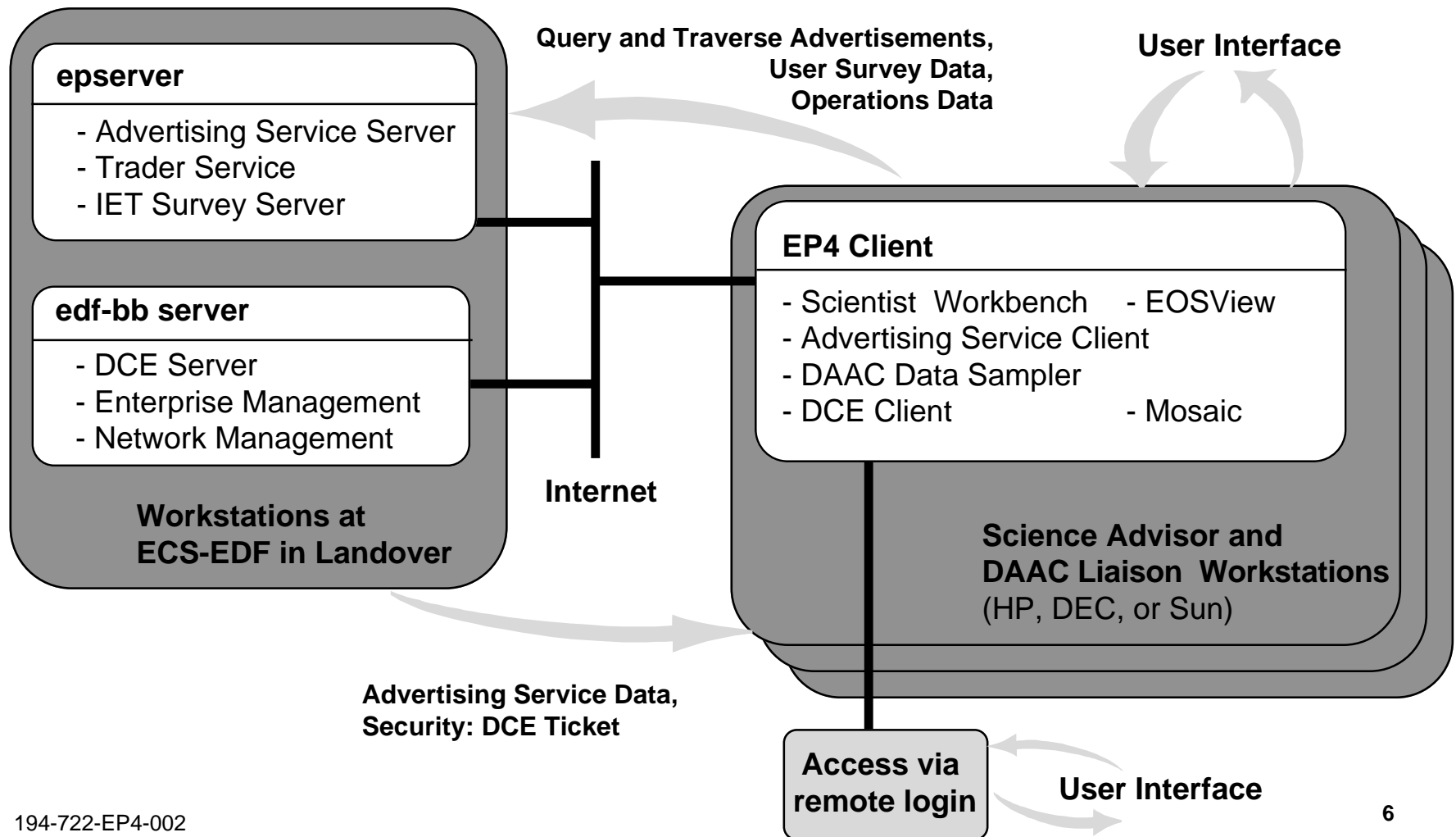
---

Segment	Subsystem	Development Methodology
SDPS	<b>Client</b>	<b>Incremental</b>
SDPS	<b>Interoperability</b>	<b>Incremental</b>
SDPS	<b>Data Management</b>	<b>Incremental</b>
SDPS	<b>Data Server</b>	Part <b>Incremental</b> , Part Formal
SDPS	Ingest	Formal
SDPS	Planning	Formal
SDPS	Data Processing	Formal
CSMS	<b>C S S</b>	<b>Incremental</b>
CSMS	<b>M S S</b>	<b>Incremental</b>
CSMS	ISS	Formal, Support to EPs
FOS	entire segment	Formal

# Summary of EP4



# EP4 Physical Configuration



# EP4 Client Workstation Requirements

---

## Platforms for EP4 Client

**HP: HP UX 9.05**

**DEC: OSF/1 Version 3.0**

**Sun: Solaris 2.3**

## Memory Required

**500K to 2.6 MB depending on data file in use**

**6 concurrent EOSView animations, full speed on a 32 MB machine**

**Disk Required: 250 MB (binaries, data, DCE client)**

# EP4 Science Data

---

## Data for Advertising Service

EDC & NSIDC data set description from GCMD

GSFC AVHRR data set description

Service descriptions developed as part of prototype development

## HDF Data for EOSView (158.5 MB)

ASF: ERS-1 data

EDC: TIMS (aircraft instrument) browse data

GSFC: TOVS pathfinder browse

JPL: AVHRR Oceans Pathfinder data

LaRC: ERBE product and SRB browse data

MSFC: SSM/I Pathfinder Data

NSIDC: SSM/I ice concentration data



# EP4 Client Hosts

---

## DAAC Workstations

**7 HPs:** ECS @ LaRC, ECS-HP1 @ EDC, ECSGSFC1 @ GSFC, Hydra @ MSFC, Snowfall @ NSIDC, Trouble @ ASF, Wave @ JPL

**4 DEC:** Borealis @ ASF, ECS-ALPHA1 @ EDC, ECS-GLOBAL @ GSFC, Meteor @ MSFC

**1 Sun:** Searider @ JPL

## Science Advisor Workstations

**Dan Baldwin:**

**Mary James:** remote login to GSFC DAAC

**Liz Smith:** remote login

**Nigel Hinds:**

**Peter Evans:** DEC alpha running OSF1 V3.0

**Dave Emmitt:**

**Sundar Christopher:** HP UX version 9.05

# EP4 Deployment

---

<b>11/94</b>	<b>System I&amp;T</b>
<b>11/94</b>	<b>DAAC Upgrades</b>
<b>12/8/94</b>	<b>Consent to Ship Review</b>
<b>12/9-12/16</b>	<b>DAAC Installation</b> Installed remotely, i.e. from ECS-EDF by EP I&T
<b>12/22/94</b>	<b>Distributed System Test</b>
<b>TBD</b>	<b>Science Advisor Installation</b> Installed remotely, i.e. from ECS-EDF by EP I&T
<b>1/4/95</b>	<b>EP Evaluation Readiness Review</b>

# **SDPS EP4 TRR Status**

**Evelyn Nakamura  
SDPS**

---

## **EP4 TRR**

**September 20, 1994**

# EP4 SDPS TRR: EOSView

---

## **EOSView**

- **Visualization application for the validation and verification of ECS HDF files.**
- **Increment 0 : display HDF file structures, raster and 2D arrays, pseudo color window, preliminary scripting language and simple animations.**

# EP4 SDPS TRR: EOSView Status

---

**No changes in design or functionality from EP4 Design Review**  
**Code inspections, peer reviews completed - 17, 18, 19, 20 Oct**  
**Demonstration of EOSView at TRR Dry Run - 27 Oct**  
**Incorporation of objectives into evaluator survey - 28 Oct**  
**Anticipate on-schedule thread delivery to I&T - 02 Nov**

# EP4 SDPS TRR: Prototypes

---

## **Advertising Service**

- **Prototype to flush out search and traversal requirements, interface requirements with the CSMS trader.**

## **Scientist Workbench**

- **Prototype to refine requirements of the ECS users desktop for launching and installing ECS applications**

# EP4 SDPS TRR: Prototypes Status

---

**No design changes since EP4 Design Review**

**Incorporation of objectives into evaluator survey - 28 Oct**

**Thread delivery status**

**Scientist Workbench - 02 Nov**

**Advertising Service - 07 Nov**

**Prototypes demonstration at TRR - 02 Nov**

# **CSMS EP4 TRR Status**

**Evan Winston  
CSMS**

---

## **EP4 TRR**

**November 2, 1994**



# CSMS EP4 Status

---

## Code Status

**Coding complete**

**All code under ClearCase CM tool**

**Unit tests completed by developers**

**Presently under segment I&T for some threads**

## Peer Reviews Status

**8 were scheduled**

**6 have been completed**

## Issues

**Scheduled I&T of threads delayed by two weeks due to Code Inspection and ClearCase issues**

# Peer Reviews for EP4

---

**Design Reviews for both Prototypes and Incremental Track**

**Coding Review for only Incremental Track**

**Peer Reviews completed for**

**Intercell Development**

**Security Authentication - DCE Authentication and Kerberos**

**Security Authorization**

**Trader**

**CSMS Database**

## **Results**

**All the completed reviews passed some with minor change requests  
which the Lead Engineer can approve without another review**

**Coding Standards were verified according to our project PI**

**Developers were exposed to design and code inspection process for the  
first time - will be ready for EP5**

# EP4 Configuration Management

---

## Status

**CSMS EP4 code is now under ClearCase CM Tool**

**All the developers getting familiar with the tool**

**Completed the source code directory structure and user/group setup for CSMS**

**Automatic triggers were setup and used in ClearCase for inspection notification for Lead Engineer and the inspection team**

## Lessons Learned

**Clearcase setup and configuration process is non-trivial - need upfront planning and resource allocation**

**Developers need early training in CM tool - Started late in the EP4 process**

**CM processes started late in EP4 - as we have started to use the process we have found that it needs refinement - already identified and corrective actions being taken**

# EP4 Deployment

---

**Unit tested code on DEC, HP and SUN workstations**

## **Issues**

**Upgrades of Operating System for HP, DEC and SUN**

**Upgrades of DCE on EP Workstations**

# **EP4 Integration and Test**

**Gil Tadmor  
CSMS**

---

**EP4 TRR**

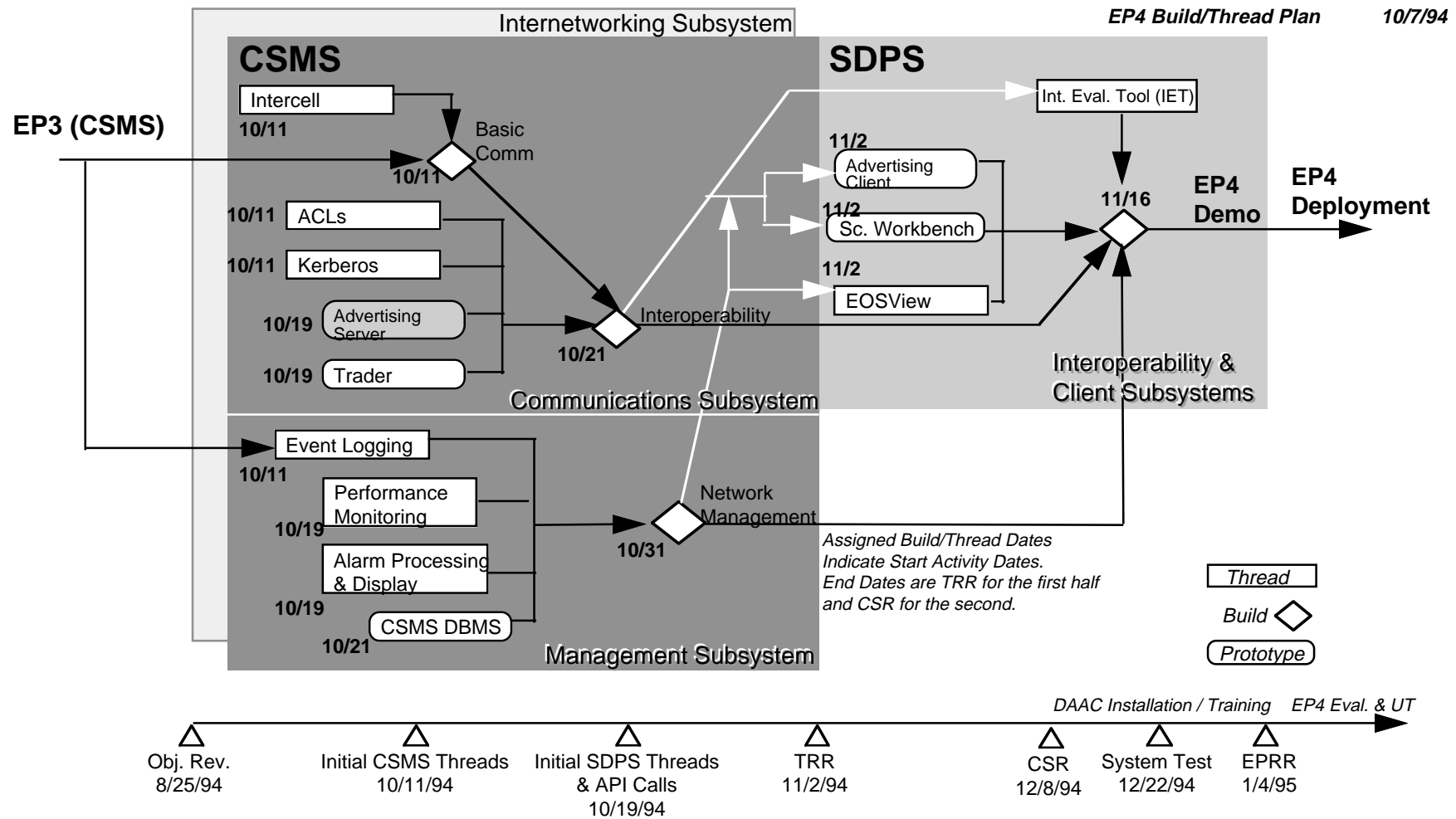
**November 2, 1994**

# Overview

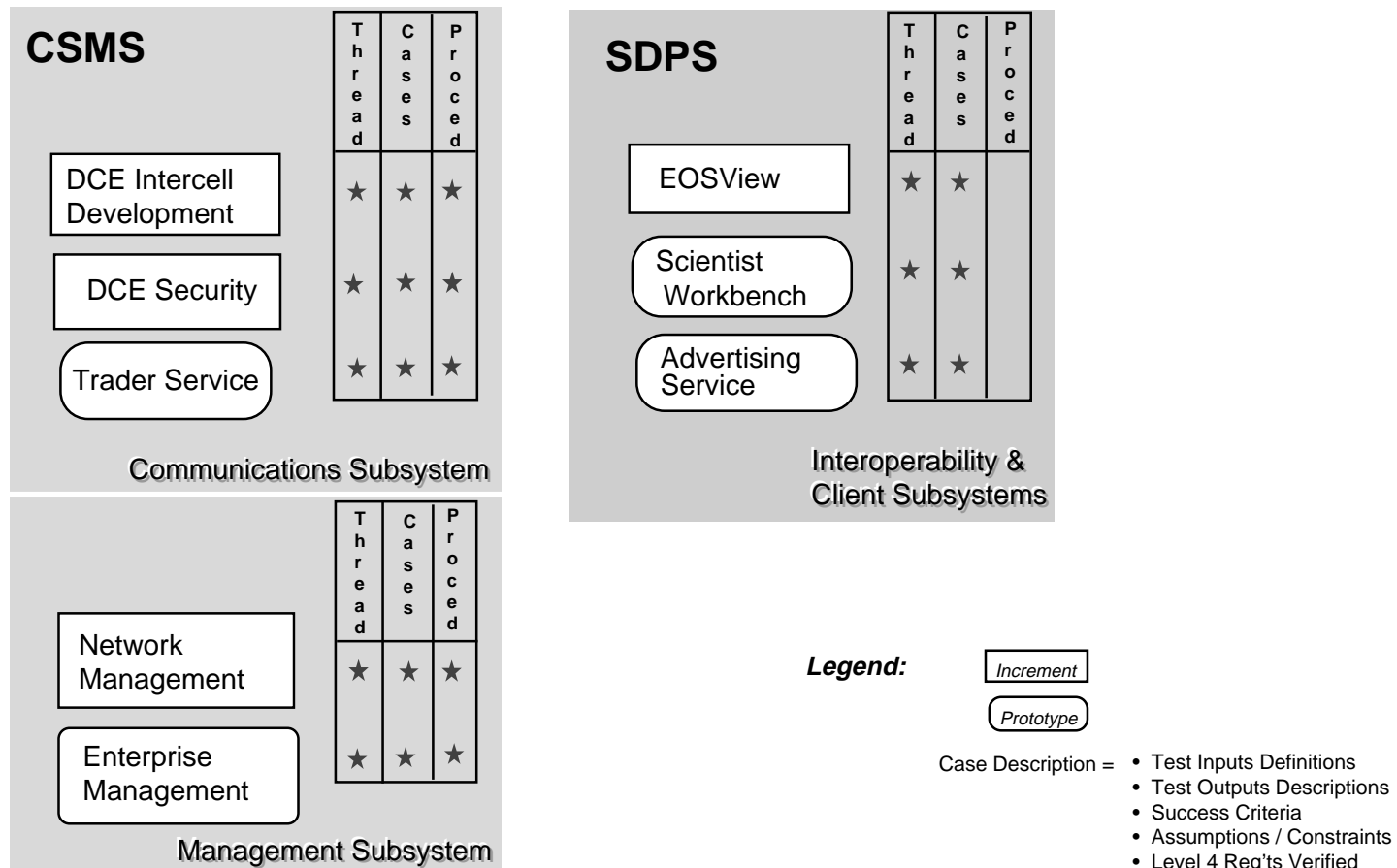
---

- **Thread Delivery Status**
  - Delay in initial thread availability
  - Integration to proceed in a “Big Bang” fashion (11/2)
  - Testing to commence on 11/2
  - Most test cases remain intact, some are modified
- **Test Cases and Procedures Status**
- **Changes Since Design Review**
  - IET Server thread tests to be combined with the IET Client tests
  - Advertising Server prototype tests to be combined with the Advertising Client tests
  - Interoperability and Network Management build tests will focus on system inspections and regression tests
- **Other Activities**
  - Installation and utilization of automated test tool
  - Participation in design and code reviews
  - Preparation for EP4 integration

# EP4 Build / Thread Plan

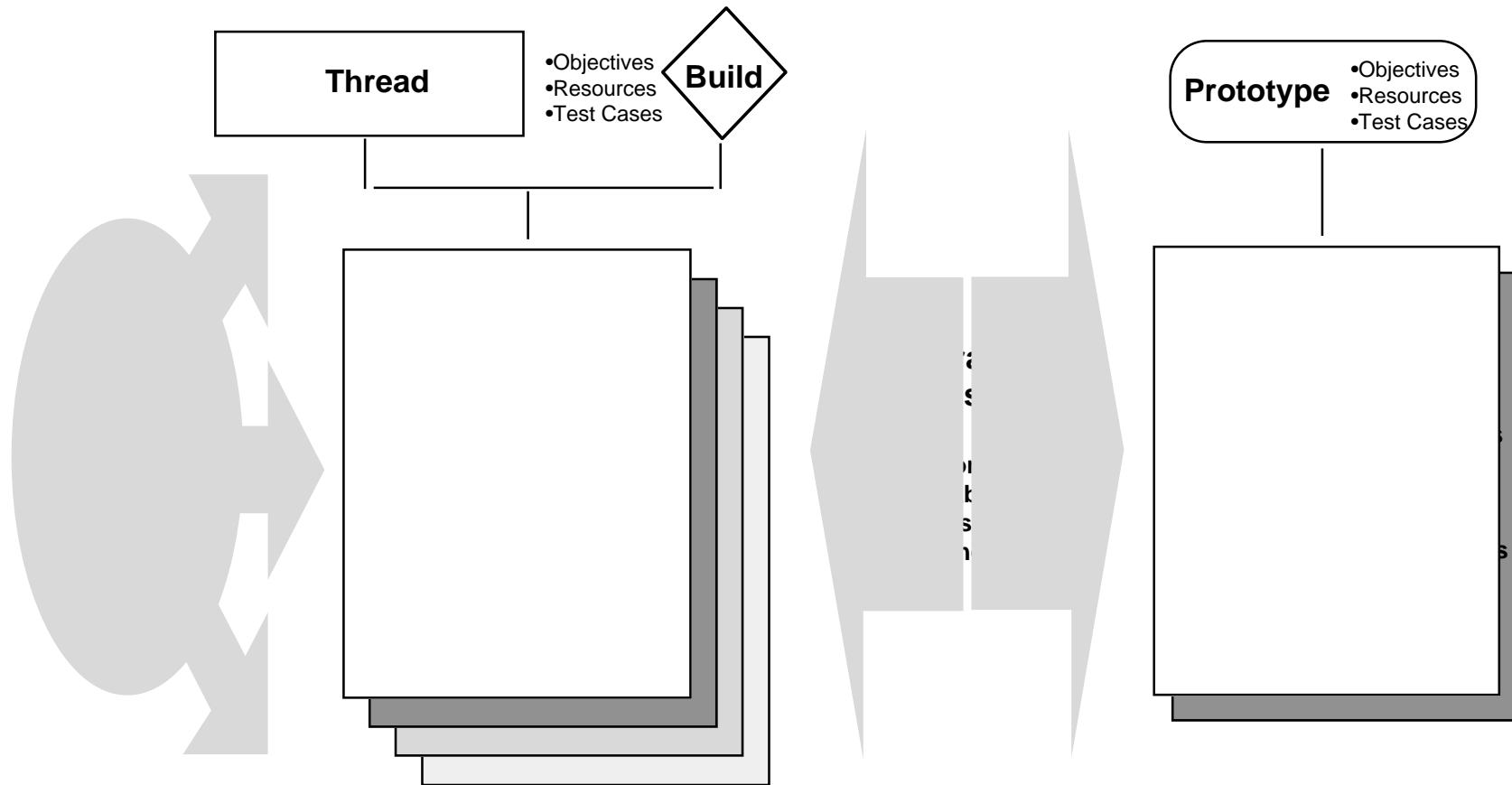


# Summary of EP4 Test Products





# Test Cases



**Thread** - a set of components (software, hardware, and data) and operational procedures that implement a function or set of functions.

**Build** - an assemblage of threads to produce a gradual buildup of system capabilities. Builds are combined with other builds and threads to produce higher level builds.

**Prototype** - focused rapid development of specific system aspects which may advance evolutionary change.

# **EP4 Usability Testing**

**Jan Poston  
SI&P**

---

**EP4 TRR**

**November 2, 1994**

# User Types and Usability Tests for EP4

---

**Science User**

**Operations Personnel**

# EP4 Evaluator Selection

---

**Would like to have representatives from the following groups:**

**User Services Working Group member (or other DAAC user services personnel)**

**V0 developer (probably IMS) or Architecture Working Group member who is interested in advertising**

**User Working Group member interested in getting more involved in V1**

**ECS science liaison**

**ECS system engineer liaison**

# Science Users

---

- **Usability Testing at Landover**

**6 to 8 Science end users will be asked to participate in usability testing while visiting Landover for PDR activities**

**Usability test participants will be divided in to groups with varying degrees of EP familiarity, e.g., Novice, Intermediate, and Expert.**

**The Usability test will be written to fall within the context of a usage scenario.**

- **Remote Log-ins from off-site**

**Participants will be asked to log on to EP4 twice during the evaluation period.**

**Participants will be asked to complete the IET Survey and record their comments in the free-text field provided at the bottom of each IET window.**

**The Remote log-in evaluation will be written to fall within the context of a usage scenario.**

# Operations Personnel

---

## **Usability Testing at Landover**

**4 to 5 Operations end users will be asked to participate in usability testing.**

**The usability test will be written to fall within the context of an operations usage scenario.**

# Current Status of EP4 Evaluation

---

**The IET Survey has been re-written to reflect the design and implementation of EP4.**

**Where possible, "baseline" questions have been included to monitor user satisfaction and level of improvement from EP3.**

**All IET Survey questions are being tested to determine the suitability and understandability of the questions.**

**DAACs have been requested to provide the names of the EP4 Evaluators.**

# Schedule of EP4 Evaluation Events

---

## **November**

Prepare usability test draft for Science User and Operations Personnel users.  
Test the usability test for each user group for suitability and understandability.

## **December**

Prepare Usability test packets for each user group.  
Coordinate with usability test participants and schedule test times.  
Begin usability tests with participants from the two groups.

## **January**

Continue usability tests.

## **February**

Complete usability tests.  
Analyze results from EP4 Remote Evaluations.  
Compile results of EP4 Evaluation for each of the user groups and write a results report.

## **March**

Submit results report for review.



# **Action Items and Next Steps**

**George Percivall  
SI&P**

---

**EP4 TRR**

**November 2, 1994**

# Open EP4 Action Items

---

#	Open Date	Description	Response By	Resolution	Due Date
19	9/20/94	Identify which science advisors desire EP4 on their w/s	Percivall	Close to TRR telecon, send e-mail to all tirekickers with description of w/s requirements, ask for reply.	11/18/94
22	9/21/94	System Management Scenarios development for use in EP4 evaluation	Winston	G. Forman indentifying CSMS individual for scenario/script development	11/4/94
23	10/5/94	List of EP4 Evaluators for ACLs: user id (as defined by user, 8 characters max) and evaluators name	Percivall	Close to TRR send message to DAAC reps for evaluators at each DAAC	11/18/94
24	10/19/94	Develop plan for upgrading DAAC workstations based on approved CCRs 94-100, 94-101, 94-108	Percivall	Meeting on 11/3/94 to develop plan for DAAC upgrades. Craig Johnson (EDS) to travel to DAACs before CSR	11/3/94